FIG. 1
Prior Art

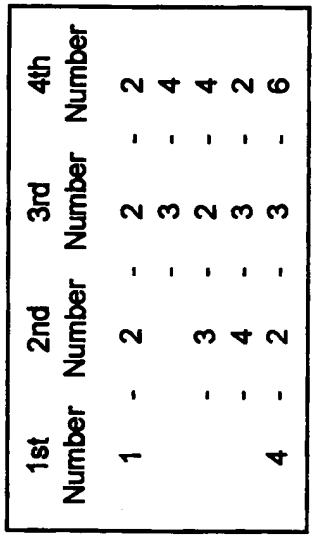

FIG. 2

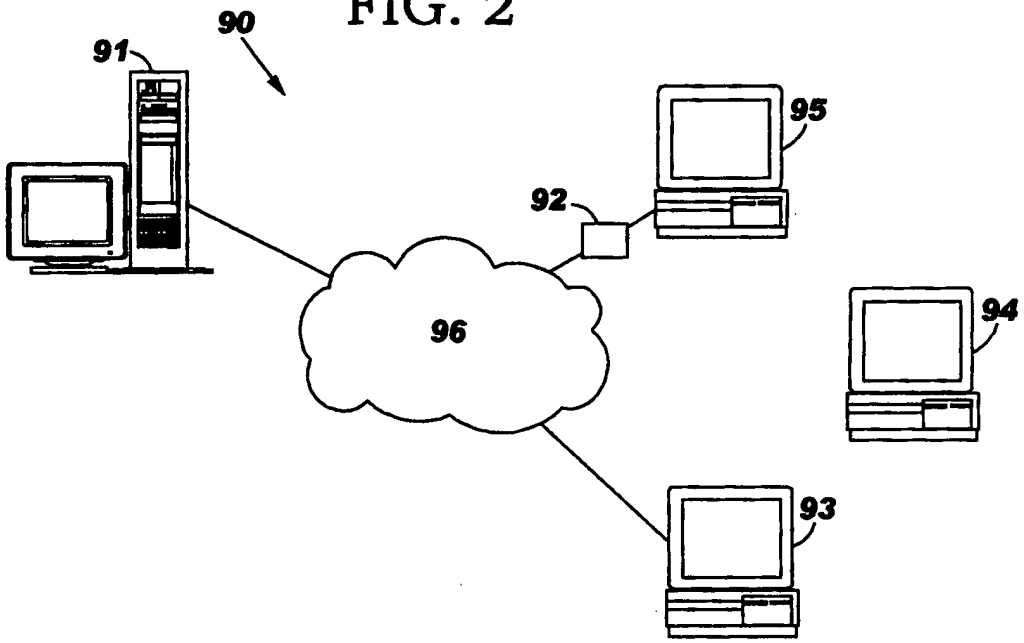
90
91
95
92
96
94
93

FIG. 3

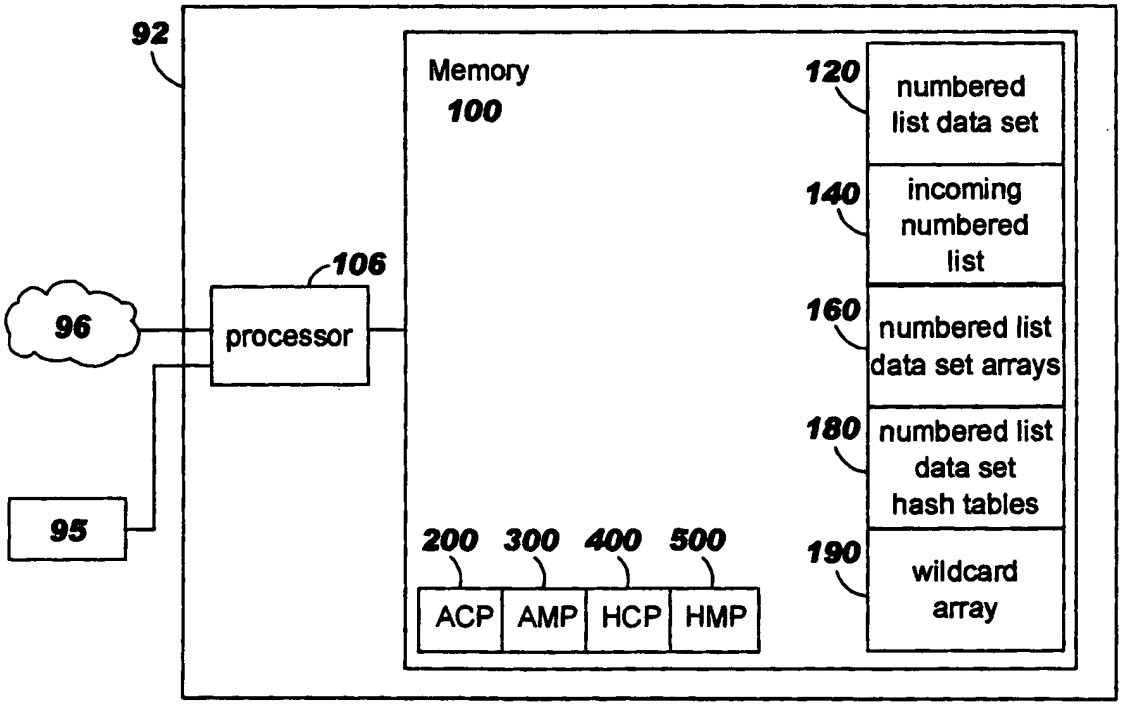
92
Memory
100
120
numbered list data set
140
incoming numbered list
160
numbered list data set arrays
180
numbered list data set hash tables
190
wildcard array
106
processor
96
95
200
300
400
500
ACP
AMP
HCP
HMP

FIG. 4

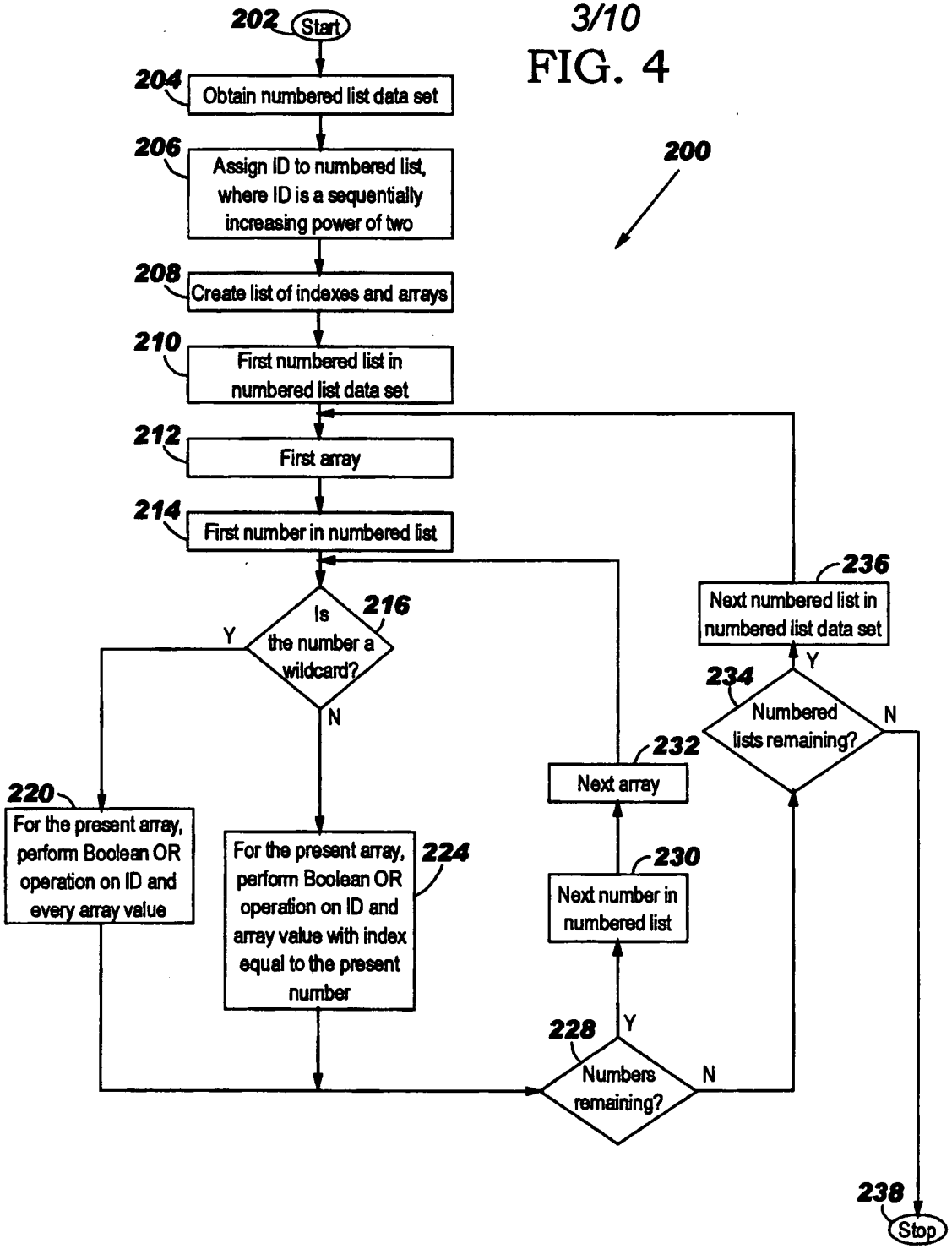
202
Start
204
Obtain numbered list data set
206
Assign ID to numbered list, where ID is a sequentially increasing power of two
208
Create list of indexes and arrays
210
First numbered list in numbered list data set
212
First array
214
First number in numbered list
216
Is the number a wildcard?
Y
N
220
For the present array, perform Boolean OR operation on ID and every array value
224
For the present array, perform Boolean OR operation on ID and array value with index equal to the present number
228
Numbers remaining?
Y
N
230
Next number in numbered list
232
Next array
234
Numbered lists remaining?
Y
N
236
Next numbered list in numbered list data set
200
238
Stop

FIG. 5

282 numbered list	284 ID
1.2.3.4	1
1.2.*.5	2
1.1.3.4	4
..5.4	8

FIG. 6

286 Index	288 Array 1	290 Array 2	292 Array 3	294 Array 4
0	0x8	0x8	0x2	0x0
1	0xF	0xC	0x2	0x0
2	0x8	0xB	0x2	0x0
3	0x8	0x8	0x7	0x0
4	0x8	0x8	0x2	0xD
5	0x8	0x8	0xA	0x2
6	0x8	0x8	0x2	0x0
7	0x8	0x8	0x2	0x0
8	0x8	0x8	0x2	0x0
9	0x8	0x8	0x2	0x0
A	0x8	0x8	0x2	0x0
B	0x8	0x8	0x2	0x0
C	0x8	0x8	0x2	0x0
D	0x8	0x8	0x2	0x0
E	0x8	0x8	0x2	0x0
F	0x8	0x8	0x2	0x0

FIG. 7

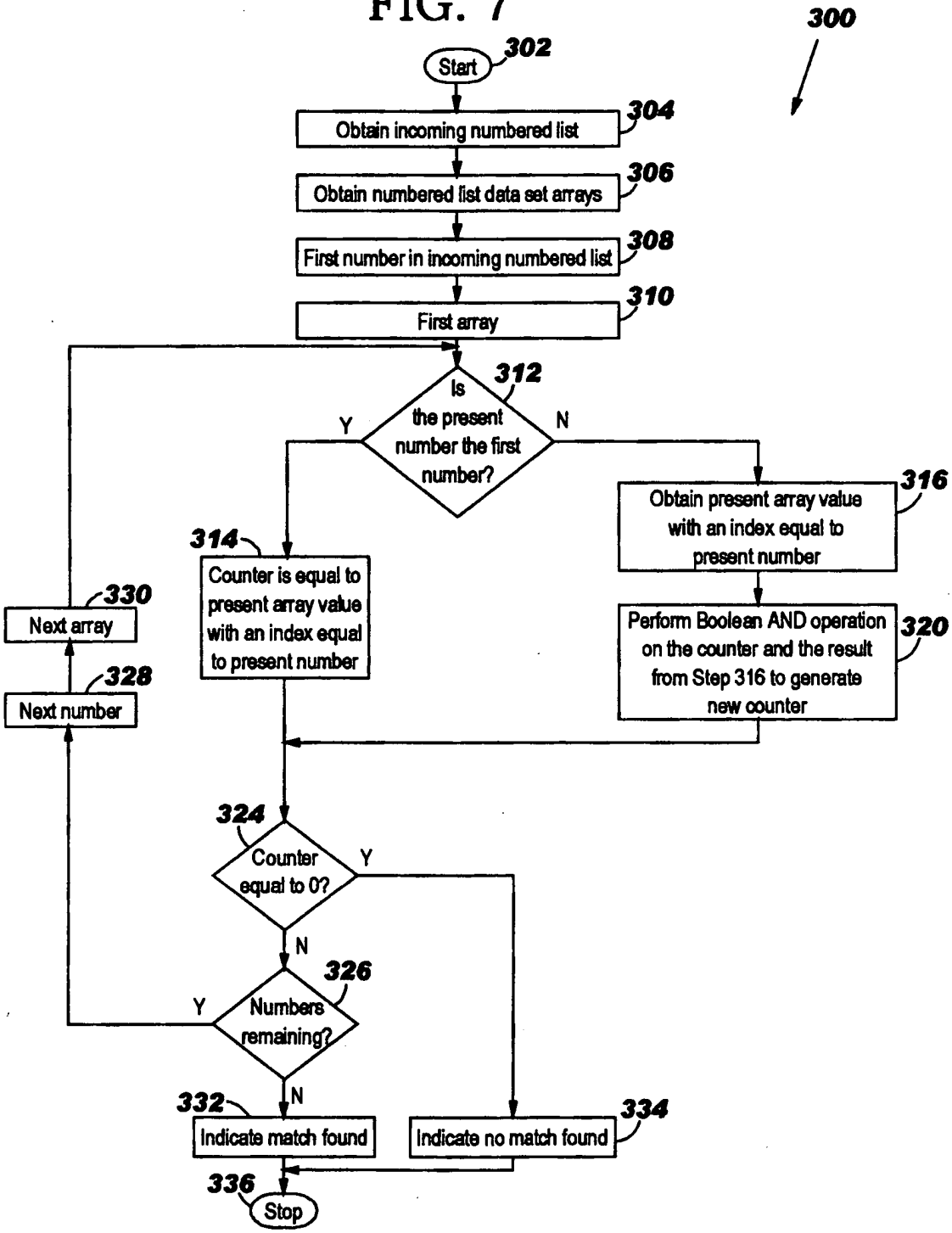
300
Start
302
Obtain incoming numbered list
304
Obtain numbered list data set arrays
306
First number in incoming numbered list
308
First array
310
Is the present number the first number?
312
Y
N
Counter is equal to present array value with an index equal to present number
314
Obtain present array value with an index equal to present number
316
Perform Boolean AND operation on the counter and the result from Step 316 to generate new counter
320
Next array
330
Next number
328
Counter equal to 0?
324
Y
N
Numbers remaining?
326
Y
N
Indicate match found
332
Indicate no match found
334
Stop
336

FIG. 8A

382 Number	384 Array Value	386 Counter at Step 312	388 Counter at Step 324
1	0xF	N/A	0xF
2	0xB	0xF	0xB
6	0x2	0xB	0x2
5	0x2	0x2	0x2

FIG. 8B

382 Number	384 Array Value	386 Counter at Step 312	388 Counter at Step 324
2	0x8	N/A	0x8
3	0x8	0x8	0x8
2	0x2	0x8	0x0
5	Not obtained	Not calculated	Not calculated

FIG. 9

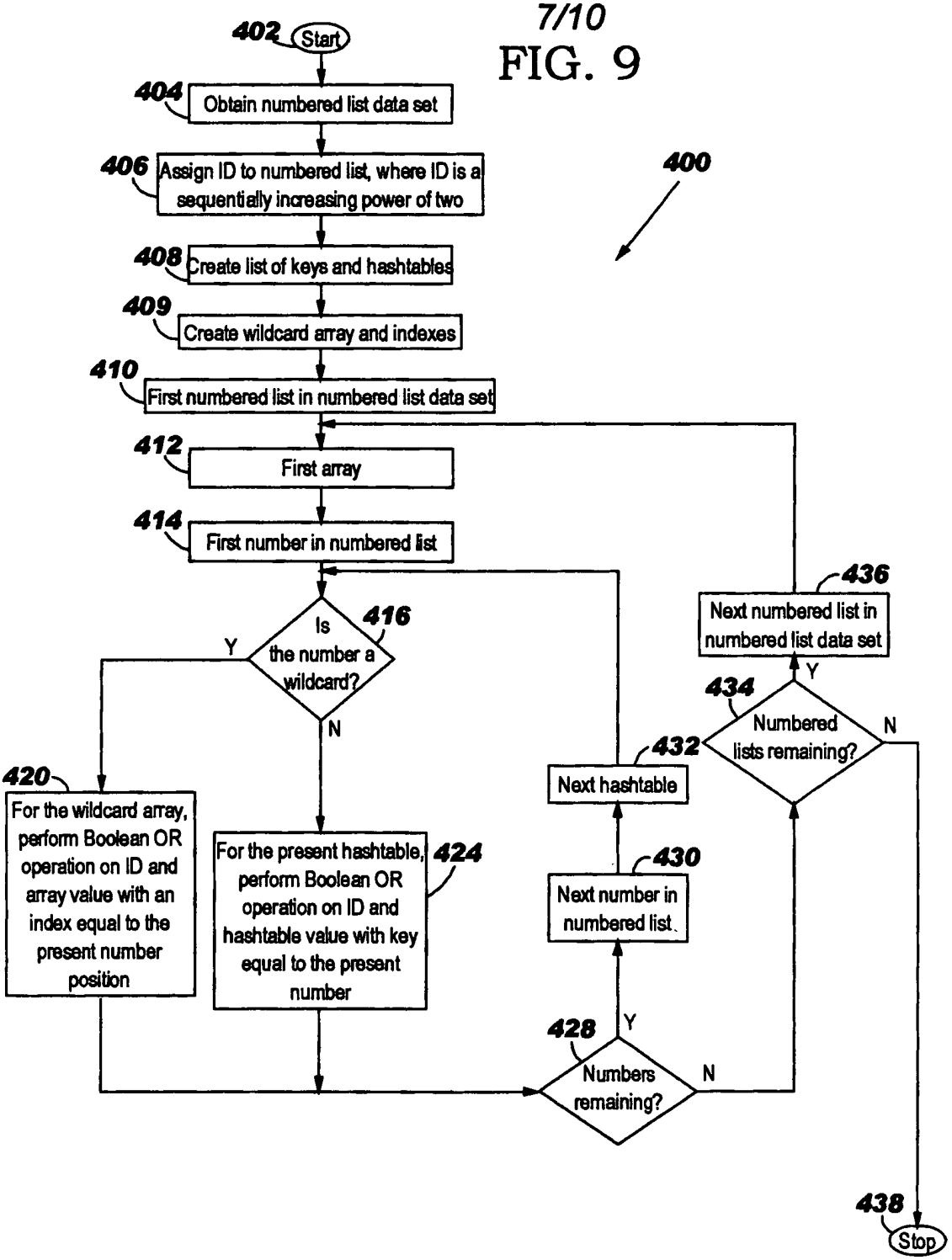
402
Start
404
Obtain numbered list data set
406
Assign ID to numbered list, where ID is a sequentially increasing power of two
400
408
Create list of keys and hashtables
409
Create wildcard array and indexes
410
First numbered list in numbered list data set
412
First array
414
First number in numbered list
416
Is the number a wildcard?
Y
N
420
For the wildcard array, perform Boolean OR operation on ID and array value with an index equal to the present number position
424
For the present hashtable, perform Boolean OR operation on ID and hashtable value with key equal to the present number
428
Numbers remaining?
Y
N
430
Next number in numbered list
432
Next hashtable
434
Numbered lists remaining?
Y
N
436
Next numbered list in numbered list data set
438
Stop

FIG. 10

480 Key	482 Hashtable 1	484 Hashtable 2	486 Hashtable 3	488 Hashtable 4
1	0x7	0x4		
2		0x3		
3			0x5	
4				0xD
5			0x8	0x2

FIG. 11

490 Index	492 Wildcard Array
1	0x8
2	0x8
3	0x2
4	0x0

9/10

FIG. 12

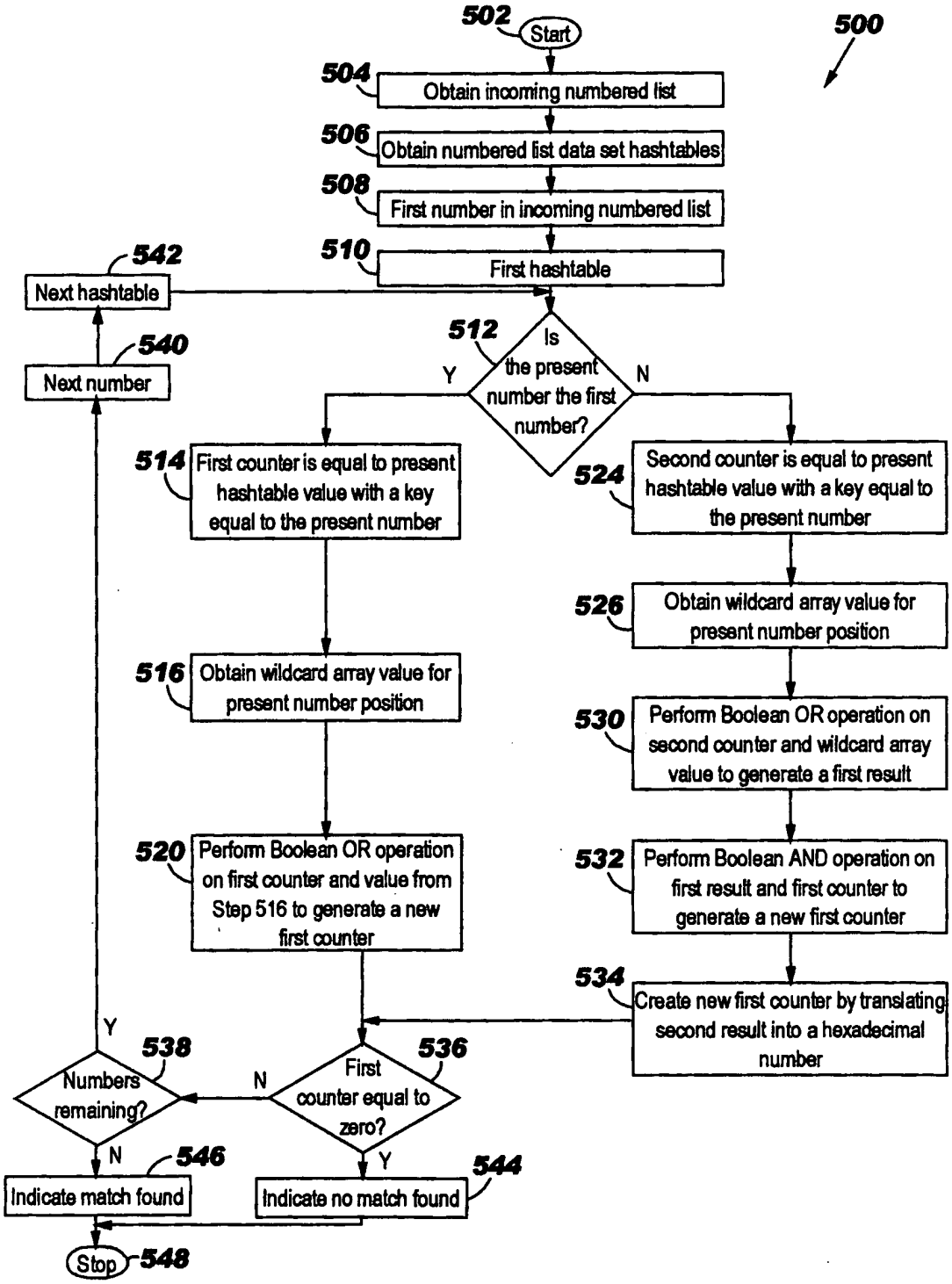
500
502
Start
504
Obtain incoming numbered list
506
Obtain numbered list data set hashtables
508
First number in incoming numbered list
510
First hashtable
542
Next hashtable
540
Next number
512
Is the present number the first number?
Y
N
514
First counter is equal to present hashtable value with a key equal to the present number
516
Obtain wildcard array value for present number position
520
Perform Boolean OR operation on first counter and value from Step 516 to generate a new first counter
524
Second counter is equal to present hashtable value with a key equal to the present number
526
Obtain wildcard array value for present number position
530
Perform Boolean OR operation on second counter and wildcard array value to generate a first result
532
Perform Boolean AND operation on first result and first counter to generate a new first counter
534
Create new first counter by translating second result into a hexadecimal number
536
First counter equal to zero?
538
Numbers remaining?
546
Indicate match found
544
Indicate no match found
548
Stop

FIG. 13A

580 Number	582 Hashtable Value	584 Wildcard array value	586 First counter at step 512	588 Second counter at step 524	590 First result at step 520/530	592 Second result at step 532	594 First counter at step 536
1	0x7	0x8	N/A	N/A	1111	N/A	0xF
2	0x3	0x8	0xF	0x3	1011	1011	0xB
6	0x0	0x2	0xB	0x0	0010	0010	0x2
5	0x2	0x0	0x2	0x2	0010	0010	0x2

FIG. 13B

580 Number	582 Hashtable Value	584 Wildcard array value	586 First counter at step 512	588 Second counter at step 524	590 First result at step 520/530	592 Second result at step 532	594 First counter at step 536
2	0x0	0x8	N/A	N/A	1000	N/A	0x8
3	0x0	0x8	0x8	0x0	1000	1000	0x8
2	0x0	0x2	0x8	0x0	0010	0000	0x0
5	Not obtained	Not obtained	Not calculated	Not calculated	Not calculated	Not calculated	Not calculated